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09/917,578	07/28/2001	Arnold E. Goldman	GCD 98-55-US	1058

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05/06/2003

Lewis B. Sternfels
3100 Inglewood Boulevard
Los Angeles, CA 90066-1062

EXAMINER

CHOI, WILLIAM C

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/917,578

Applicant(s)

GOLDMAN ET AL.

Examiner

William C. Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-17 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 13 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Loha Ben
Primary Examiner

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujihara et al (U.S. 5,065,011).

In regards to claim 1, Fujihara discloses a vehicle for enabling attachment of an optic fiber to a multi-integrated optic chip in optical communication therewith, and for maintaining alignment of the fiber at its end adjacent the chip (column 7, line 57 – column 8, line 13, Figure 15), comprising: a sleeve having a symmetrically-shaped cavity (column 7, lines 46-52, Figures 14 and 15, “72”) bounded by termini which respectively interface with the chip (column 7, lines 67-68, Figure 16, “68”) and the fiber (column 7, lines 57-59, Figure 15, “64”); and an adhesive disposed within the cavity (column 7, lines 59-62, Figure 14, “74” and Figure 15, “64”) and symmetrically shaped thereby (Figure 15, “72”) for precisely positioning and bonding the fiber to the chip (column 7, lines 57-59 and column 7, line 67 – column 8, line 12, Figure 16, “68” and “70”).

In regards to claim 2, Fujihara discloses a vehicle for enabling attachment of an optic fiber to a multi-integrated optic chip in optical communication therewith, and for

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maintaining alignment of the fiber at its end adjacent the chip (column 7, line 57 – column 8, line 13, Figure 15), comprising: a sleeve having a symmetrically-shaped cavity (column 7, lines 46-52, Figures 14 and 15, “72”) bounded by termini which respectively interface with the chip (column 7, lines 67-68, Figure 16, “68”) and the fiber (column 7, lines 57-59, Figure 15, “64”); and in which said cavity has an axis and is internally bounded by a wall which is substantially centered on the axis and which extends from said chip-interfacing terminus to said fiber-interfacing terminus, said termini are centered on the axis, and a line, lying within any plane intersecting the axis at right angles thereto and terminating in said cavity wall, is bisected into two equal segments (Figure 14, “74”); and an adhesive disposed within the cavity (column 7, lines 59-62, Figure 14, “74” and Figure 15, “64”) and symmetrically shaped thereby (Figure 15, “72”) for precisely positioning and bonding the fiber to the chip (column 7, lines 57-59 and column 7, line 67 – column 8, line 12, Figure 16, “68” and “70”).

In regards to claim 3, Fujihara discloses a vehicle for enabling attachment of an optic fiber to a multi-integrated optic chip in optical communication therewith, and for maintaining alignment of the fiber at its end adjacent the chip (column 7, line 57 – column 8, line 13, Figure 15), comprising: a sleeve having a symmetrically-shaped cavity (column 7, lines 46-52, Figures 14 and 15, “72”) bounded by termini which respectively interface with the chip (column 7, lines 67-68, Figure 16, “68”) and the fiber (column 7, lines 57-59, Figure 15, “64”), and which is configured to fit onto the chip (column 7, line 67 – column 8, line 4, Figure 16, “68”) and is disposed to accept the fiber (column 7, lines 57-59, Figure 16, “64”); and an adhesive disposed within the cavity

(column 7, lines 59-62, Figure 14, "74" and Figure 15, "64") and symmetrically shaped thereby (Figure 15, "72") for precisely positioning and bonding the fiber to the chip (column 7, lines 57-59 and column 7, line 67 – column 8, line 12, Figure 16, "68" and "70").

Regarding claim 4, Fujihara et al discloses wherein said cavity has an axis and is internally bounded by a wall which is substantially centered on the axis and which extends from said chip-fitting terminus to said fiber-accepting terminus; said termini are centered on the axis; and a line lying within any plane intersecting the axis at right angles thereto and terminating in said cavity wall is bisected into two equal segments (Figure 14).

Regarding claim 5, Fujihara et al discloses wherein said cavity wall slopes from said chip-fitting terminus to said fiber-accepting terminus (Figure 14, "A").

Regarding claim 6, the sleeve of Fujihara et al would inherently control said adhesive so as to provide and preserve a symmetrical bonding of the fiber with respect to the chip over gravitational and wicking effects, this being reasonably assumed from Fujihara et al disclosing a very thin layer of adhesive (column 8, lines 19-20).

Regarding claim 7, Fujihara et al discloses wherein said cavity wall is shaped as a truncated right circular cone (Figure 14, "A").

Regarding claim 8, Fujihara et al discloses wherein said cavity is shaped as a truncated pyramid (i.e. pyramid with infinite number of walls) (Figure 14, "A").

Regarding claims 9 and 10, The sleeve of Fujihara et al could inherently be temporarily or permanently attached to said adhesive and the chip, this being

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reasonably assumed from Fujihara et al disclosing a very thin layer of adhesive (column 8, lines 19 and 20), which could easily be removed if necessary by common releasing agents.

In regards to claim 11, Fujihara et al discloses a method for attaching an optic fiber to an optic chip and for maintaining alignment of the fiber at its end adjacent the chip, comprising the steps of: positioning a sleeve having a symmetrically shaped cavity (Figure 16, "70") on the chip (column 7, line 67 – column 8, line 4, Figure 16, "68"); placing an adhesive into the sleeve cavity for being symmetrically shaped thereby (column 7, lines 57-62, Figures 14 and 15, "64" and "74"); inserting the fiber into the cavity (column 7, lines 57-59, Figure 15, "64"); securing the fiber to the chip (column 7, line 67 – column 8, line 12); and would inherently comprise the step of curing the adhesive whereby the adhesive, as symmetrically shaped by the cavity, precisely positions the fiber to the chip, this being reasonably assumed from the necessity for the adhesive to be cured in order for the operation of the module to be performed.

Regarding claim 12, Fujihara et al discloses said method comprising the step of aligning the fiber within the cavity and positioning the fiber end adjacent the chip (column 7, line 57 – column 8, line 12, Figure 16, "64" and "68").

Regarding claim 14, Fujihara et al discloses said method comprising the step of leaving the sleeve securely on the chip after the adhesive has cured (Figure 16, "72").

Regarding claim 15, Fujihara et al discloses said method comprising the step of providing the sleeve cavity with a truncated pyramid configuration (i.e. pyramid with infinite number of walls) (Figure 14, "A").

Regarding claim 16, Fujihara et al discloses said method comprising the step of providing the sleeve cavity with a truncated right circular cone configuration (Figure 14, "A").

In regards to claim 17, Fujihara et al discloses a method for attaching an optic fiber to an optic chip and for maintaining alignment of the fiber at its end adjacent the chip, comprising the steps of: utilizing a sleeve having a symmetrically shaped cavity (Figure 16, "70"); placing an adhesive into the sleeve cavity for being symmetrically shaped thereby (column 7, lines 57-62, Figures 14 and 15, "64" and "74"); positioning the sleeve onto the chip (column 7, line 67 – column 8, line 12); inserting the fiber into the cavity (column 7, lines 57-59, Figure 15, "64"); aligning the fiber within the cavity (column 7, lines 57-66) and positioning the fiber end adjacent the chip and securing the fiber to the chip (column 7, lines 57-59; column 7, line 68 – column 8, line 1 and column 8, lines 8-12); and would inherently comprise the step of curing the adhesive whereby the adhesive, as symmetrically shaped by the cavity, precisely positions the fiber to the chip, this being reasonably assumed from the necessity for the adhesive to be cured in order for the operation of the module to be performed.

Regarding claim 19, Fujihara et al discloses said method comprising the step of leaving the sleeve securely on the chip after the adhesive has cured (Figure 16, "72").

Regarding claim 20, Fujihara et al discloses said method comprising the step of providing the sleeve cavity with a truncated pyramid configuration (i.e. pyramid with infinite number of walls) (Figure 14, "A").

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Regarding claim 21, Fujihara et al discloses said method comprising the step of providing the sleeve cavity with a truncated right circular cone configuration (Figure 14, "A").

Allowable Subject Matter

Claims 13 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a combination of all the claimed features as presented in claims 13 and 18: a method for attaching an optic fiber to an optic chip as claimed respectively in claims 11 and 17, specifically further comprising the step of removing the sleeve from the chip after the adhesive has cured.

Response to Arguments

Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (703) 305-3100. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (703) 308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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W.C.

William Choi
Patent Examiner
Art Unit 2873
May 2, 2003



Loha Ben
Primary Examiner